

passage when the pin is in its retracted position. A second end of the pin has a pressure surface exposed to hydraulic pressure in a variable pressure fluid reservoir, variation of hydraulic pressure in the reservoir assisting in reciprocating the pin, in cooperation with fluid pressure acting on the enlarged distal portion.

BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 is a side-view of an automated pin for a gas-assisted injection molding system according to a preferred embodiment of the present invention.

IN THE CLAIMS

Please amend the claims to read as follows:

1. A nozzle for the injection of fluid into a molding chamber comprising:
a hollow passage having a distal end for connecting a pressurized fluid supply to the interior of said chamber; and

a pin extending through said passage and reciprocal between an extended position and a retracted position, said pin having an enlarged distal portion extending beyond the distal end of said passage, said enlarged distal portion being at least partially within and substantially blocking said passage when said pin is in its retracted position, and having a pressure surface exposed to pressurized fluid supplied via said passage; and

an actuator operably coupled to said pin, and reciprocating said pin in cooperation with said pressurized fluid.

3. The nozzle of claim 1 wherein said actuator is a hydraulic actuator.
6. The nozzle of claim 1 wherein said actuator is a ball screw drive for reciprocating the pin.
7. A gas assisted injection molding apparatus comprising:
- a molding chamber;
 - a supply of pressurized gas;
 - a hollow conduit communicating with said gas supply and extending into said chamber;
 - a pin extending through said conduit and reciprocal between an extended position and a retracted position, said pin having an enlarged distal portion exposed to fluid pressure from said hollow conduit which is positioned at least partially within and which substantially closes said conduit when said pin is in said retracted position; and
 - an electronic actuator reciprocating said pin in cooperation with said fluid supply pressure.
11. (NEW) A nozzle for the injection of fluid into a molding chamber comprising:
- a hollow passage having a tapered first end for connecting a pressurized fluid supply to the interior of said chamber; and
 - a pin extending through said passage and reciprocal between an extended position and a retracted position, a first end of said pin having an enlarged distal portion